



Science4Peace @ CERN

Scientific diplomacy in (in)action

John Ellis (King's College London)

Formerly advisor to CERN DGs on relations with Non-Member States

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

C O N V E N T I O N

FOR THE ESTABLISHMENT OF A EUROPEAN ORGANIZATION
FOR NUCLEAR RESEARCH

PARIS, 1st JULY, 1953

“The Organization shall provide for collaboration among European States in nuclear research of a pure scientific and fundamental character ... The Organization shall have no concern with work for military requirements”

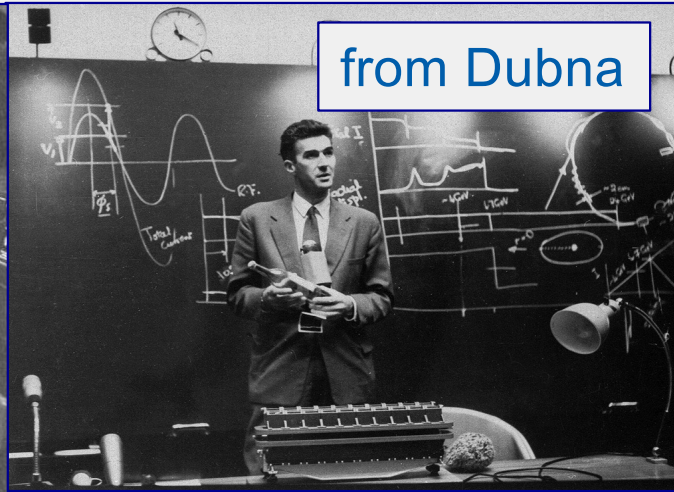


1950s, 1960s: Early Days

- Foundation supported by UNESCO
 - US help: I.I. Rabi, advice on PS design
- ‘Science for Peace’ objective
- 1958/9 contacts with JINR (Dubna)
- 1967 agreement with SU (Serpukhov)



BNL



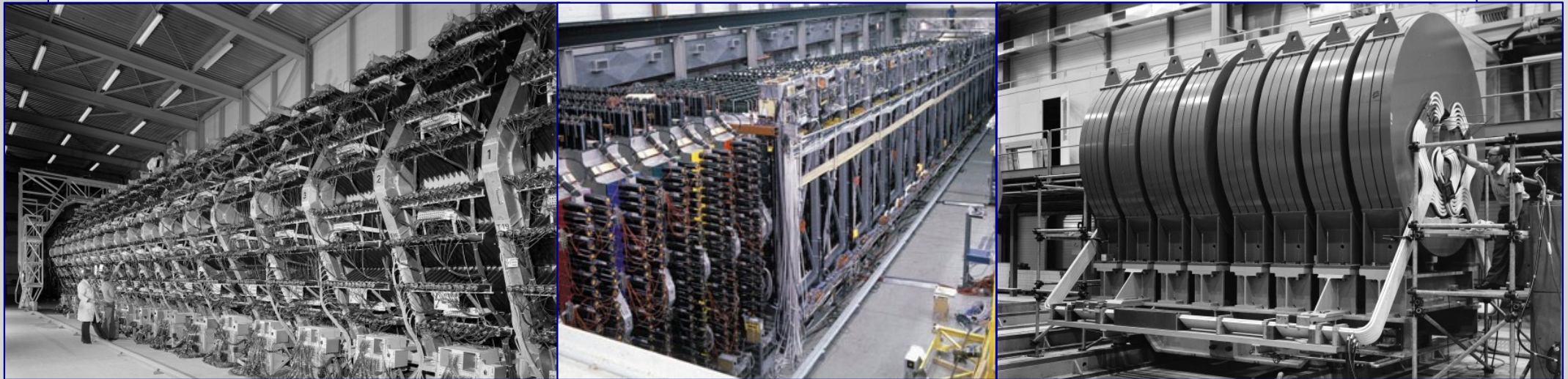
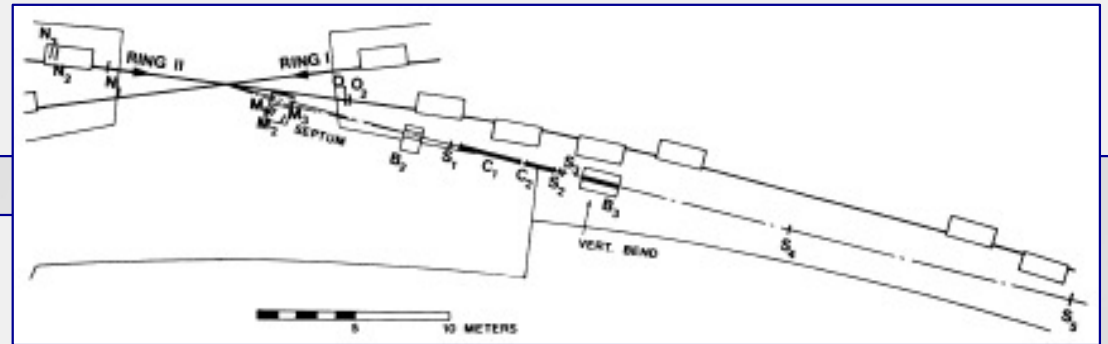
from Dubna



to Serpukhov

1970s: NMS Participations in CERN Experiments

- ISR
- SPS: e.g., CN, Dubna, SU in WA1, WA2, NA4



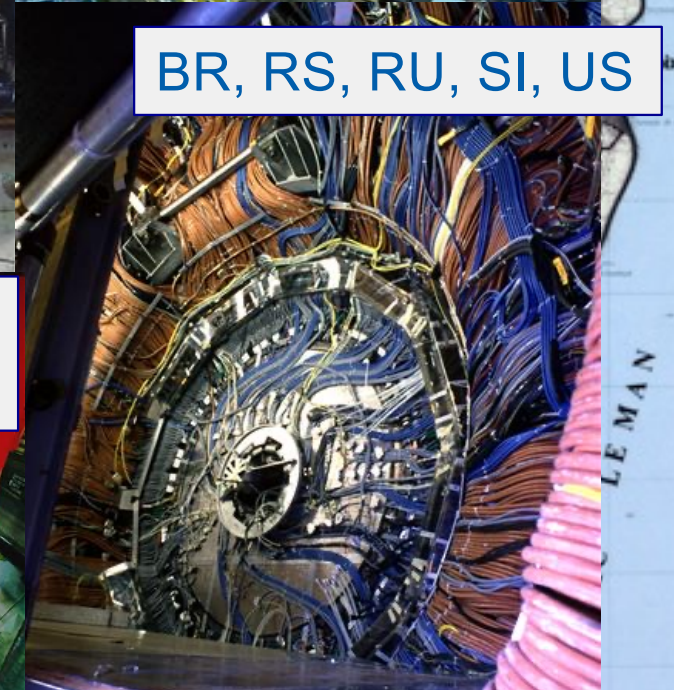
1970s/1980s: Proton-Antiproton Collider Experiments



- US participation in UA1

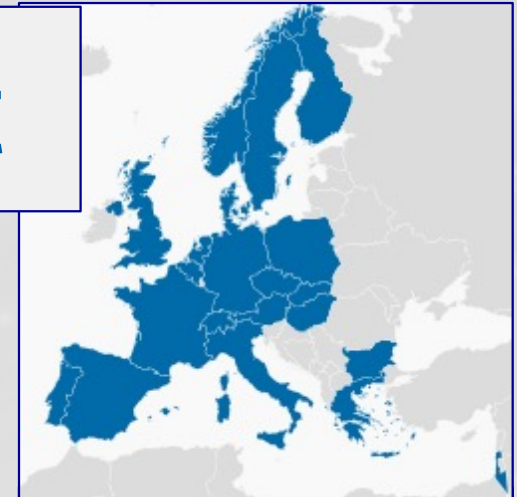
1980s: LEP Experiments

- Collaborations of 100s of physicists from many countries
- Important contributions from several NMS



Openings to West and East

- The 'New Europe' beyond the 'core' MS:
 - ES 1983, PT 1985, FI, PL 1991, HU 1992, CZ, SK 1993, BG 1999, RO 2008, RS 2012, IL 2014, EE 2024
- Important innovation in 1989: international co-operation agreements with NMS, now ~ 50



CERN/1753
Original : English
5 June 1989

ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

EIGHTY-SEVENTH SESSION OF THE COUNCIL

Geneva - 23 June 1989

STATUS OF RELATIONS WITH NON-MEMBER STATES

Following the reflections started in 1987 subsequent to the remarks made in the CERN Review Committee (CRC) on "the participation of non-Member States in the CERN Programme", the Committee of Council at its meeting on 23 February 1989 welcomed the proposal by the Director-General of a policy based on a closer scientific and technical co-operation with the many countries already involved in the CERN activities.

In this document, the Director-General reports on the visits made and contacts established with countries outside Western Europe. He now proposes to continue the discussions at his level with the purpose of negotiating and signing individual general Agreements with those countries willing to do so. Such Agreements would not of themselves entail any new financial commitments for the Organization. He therefore asks Council to approve the proposed draft general Agreement and to authorize him to sign such Agreements.

1990s: The LHC

- Global project, particularly after end of SSC
- Special Observers: US, RU, JP
- Other contributors: CA, IN, PK



INTERNATIONAL CO-OPERATION AGREEMENT

between

THE EUROPEAN ORGANIZATION FOR NUCLEAR
RESEARCH (CERN)

and

THE DEPARTMENT OF ENERGY
OF THE UNITED STATES OF AMERICA

and

THE NATIONAL SCIENCE FOUNDATION
OF THE UNITED STATES OF AMERICA

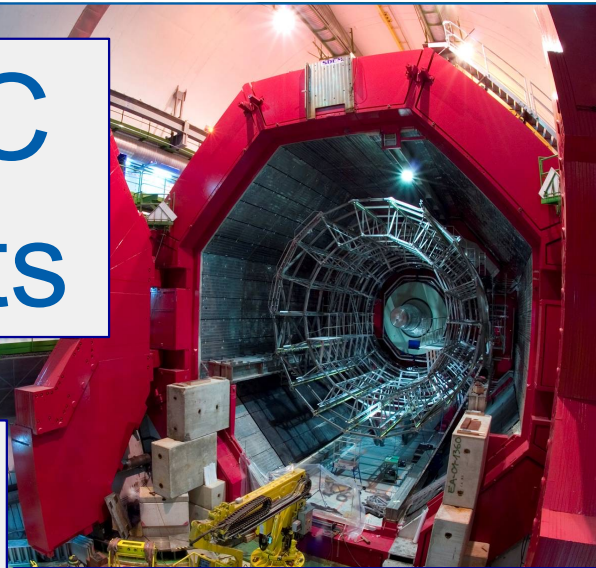
concerning

SCIENTIFIC AND TECHNICAL CO-OPERATION
ON LARGE HADRON COLLIDER ACTIVITIES

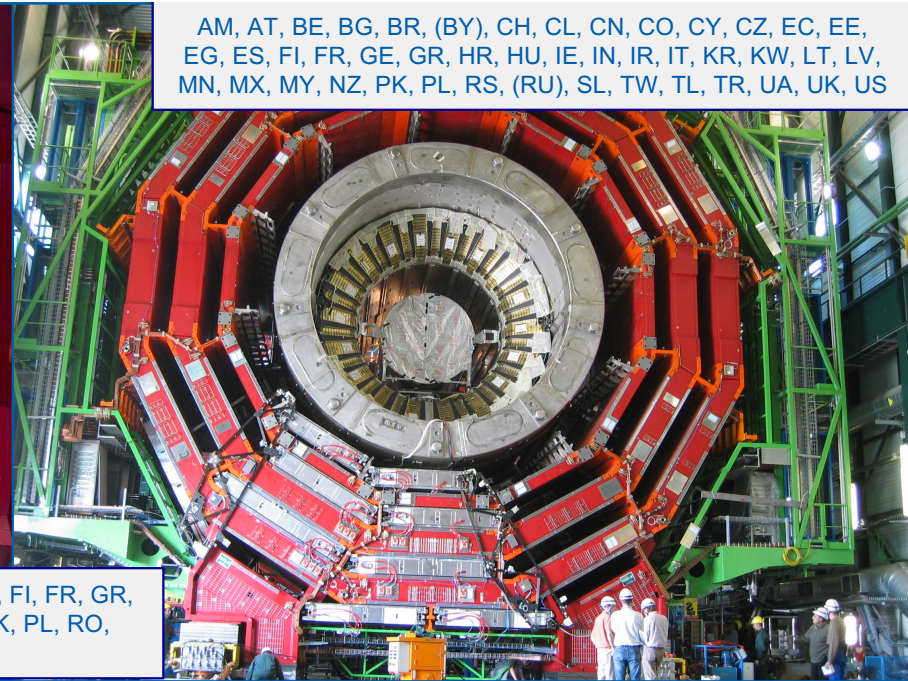
1997

2000s: LHC Experiments

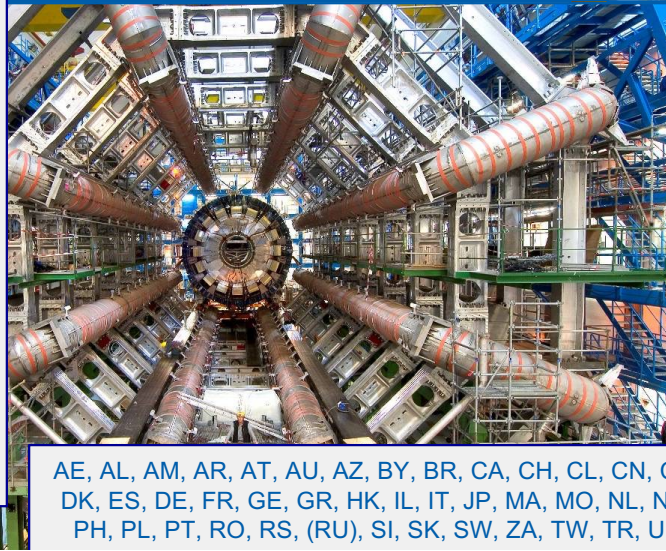
- Collaborations of 1000s of physicists from dozens of countries
- ‘Equal’ participation by NMS



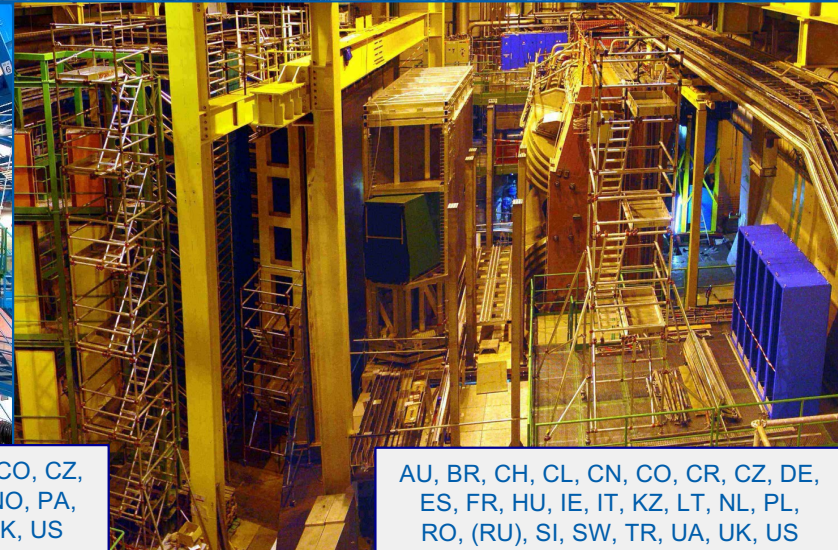
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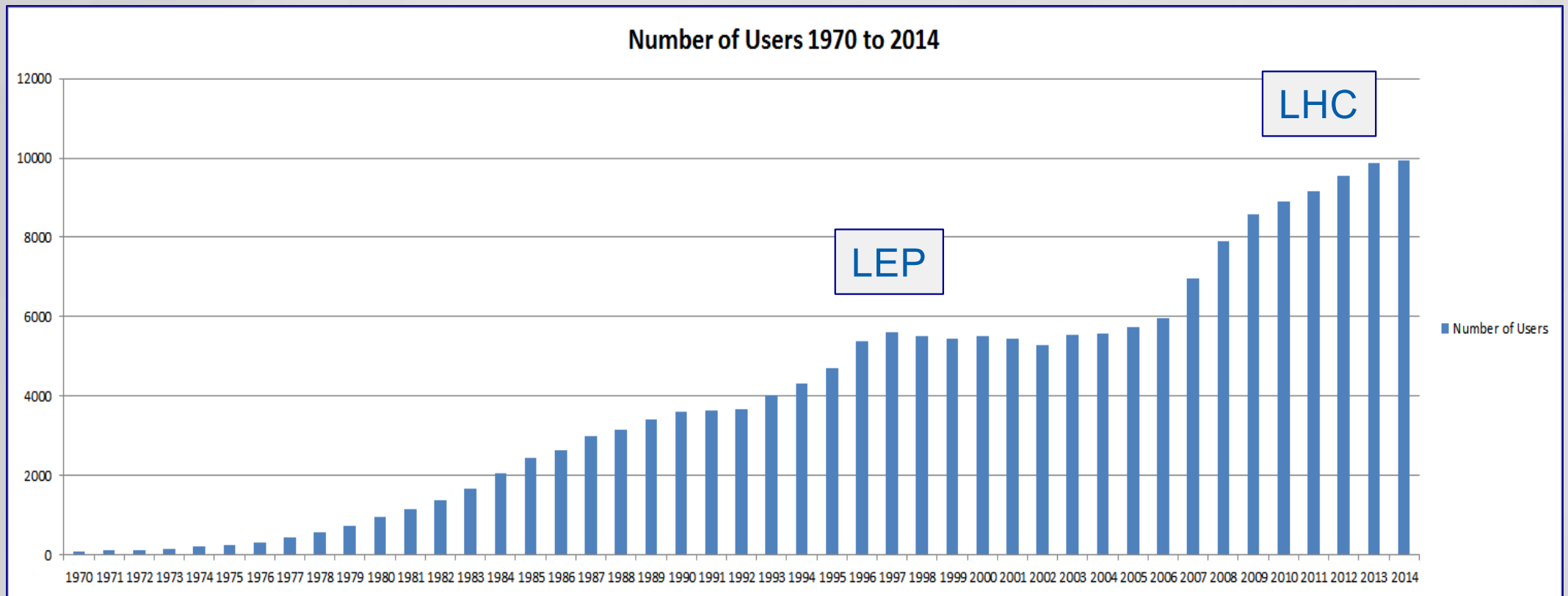


AU, BR, CH, CL, CN, CO, CR, CZ, DE, ES, FR, HU, IE, IT, KZ, LT, NL, PL, RO, (RU), SI, SW, TR, UA, UK, US

Swords into Ploughshares



Evolution of CERN User Numbers



Scientists from around the World

Member States 7446

Austria 97 – Belgium 102 – Bulgaria 83 – Czech Republic 207
Denmark 50 – Estonia 20 – Finland 76 – France 801
Germany 1131 – Greece 220 – Hungary 84 – Israel 56 – Italy 2013
Netherlands 154 – Norway 60 – Poland 370 – Portugal 125 –
Romania 141 – Serbia 50 – Slovakia 122 – Spain 497
Sweden 76 – Switzerland 196 – United Kingdom 715

Associate Member States in the pre-stage to Membership 55

Cyprus 18 – Slovenia 37

Associate Member States 1064

Brazil 157 – Croatia 51 – India 463 – Latvia 18 – Lithuania 27 –
Pakistan 70
Türkiye 187 – Ukraine 91

Observers 2200

Japan 230 – (Russia 824) – USA 1146

Non-Member States and Territories 1975

Afghanistan 3 – Albania 6 – Algeria 15 – Argentina 22 – Armenia 17 – Australia 35 – Azerbaijan 5 – Bahrain 11 Bangladesh 11 – Belarus 26 – Bolivia 2 – Bosnia and Herzegovina 1 –
Botswana 1 – Burundi 1 – Canada 149, Chile 43 – Colombia 57 – Congo 1 – Costa Rica 4 – Cuba 16 – Democratic Republic of the Congo 1 – Ecuador 13
Egypt 38 – El Salvador 1 – Georgia 58 – Guatemala 2 – Honduras 3 – Hong Kong 5 – Iceland 3 – Indonesia 11 – Iran 45
Ireland 33 – Jamaica 1 – Jordan 5 – Kazakhstan 15 – Kenya 2 – Kuwait 1 – Kyrgyzstan 2 – Lebanon 23 – Lesotho 1 Luxembourg 2 – Madagascar 4 – Macao 2 – Malaysia 11 – Malta 3 –
Mauritius 1 – Mexico 97 – Mongolia 3 – Montenegro 7 Morocco 31 – Myanmar 1 – Nepal 13 – New Zealand 2 – Nigeria 6 – North Macedonia 4 – Palestine 5 – People's Republic of China
701 – Paraguay 2 – Peru 11 – Philippines 2 – Republic of Korea 197 – Saint Kitts and Nevis 1 – Saudi Arabia 4 Senegal 2 – South Africa 49 – Sri Lanka 9 – Syrian Arab Republic 4 –
Taiwan 57 – Thailand 20 – Trinidad and Tobago 1 Tunisia 6 – Uganda 1 – Uruguay 1 – Uzbekistan 2 – Venezuela 7 – Viet Nam 12 – Yemen 1 – Zambia 1 – Zimbabwe 3



International
Co-operation
Agreements:

AB, AE, AL, AM, AR,
AU, AZ, BD, BH, BO,
BR, BY, CA, CL, CN,
CO, CR, DZ, EC, EE,
EG, GE, GH, HK, HO,
IC, ID, IR, IS, JO,
KR, KZ, LB, LT, MA,
MD, ME, MK, MO, MT,
MY, MX, MZ, NP, NZ,
PA, PE, PH, PK,
PR, RK, RW, QA, SA,
SI, SL, SN, TL, TN,
TU, TW, VN, UZ, ZA

Training Students around the World

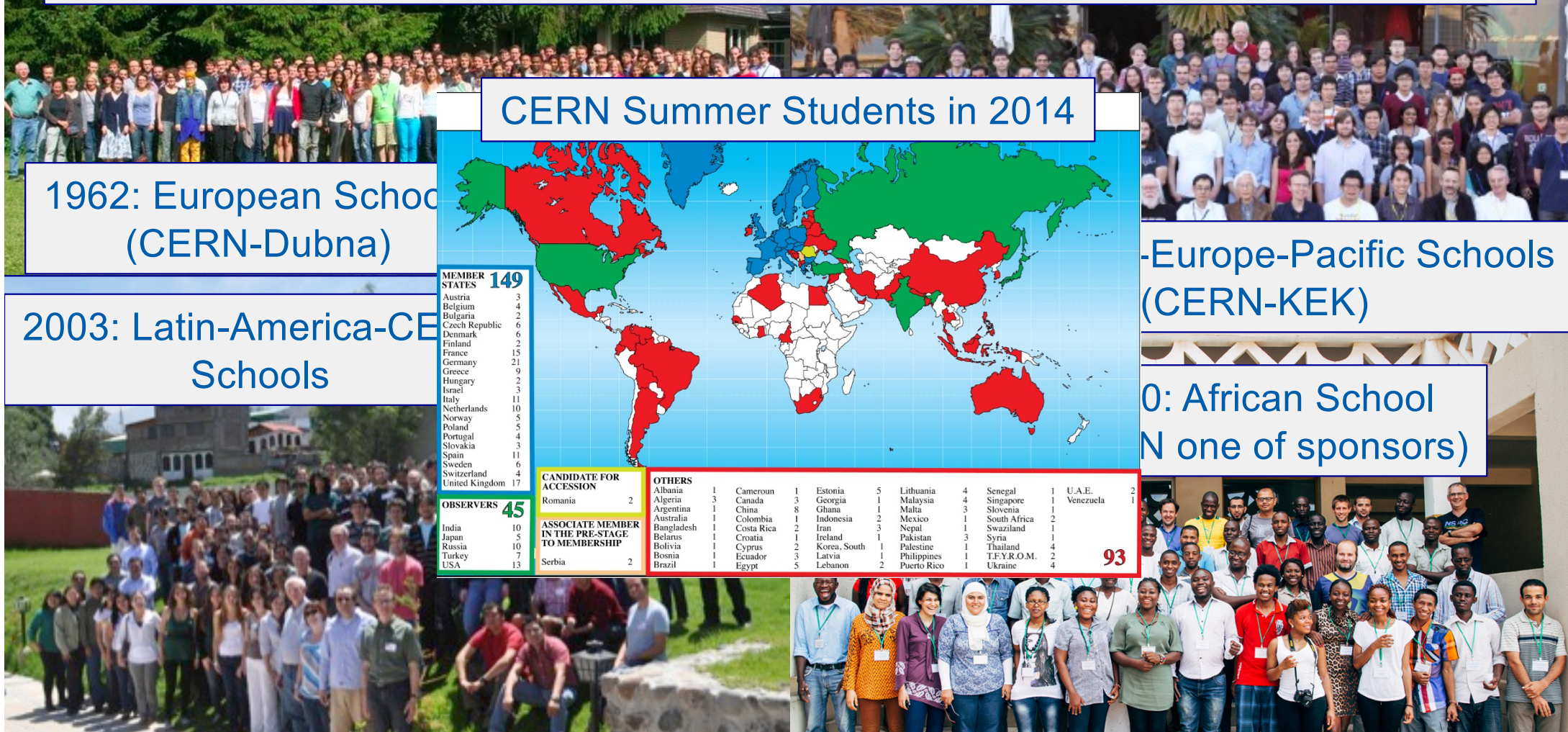
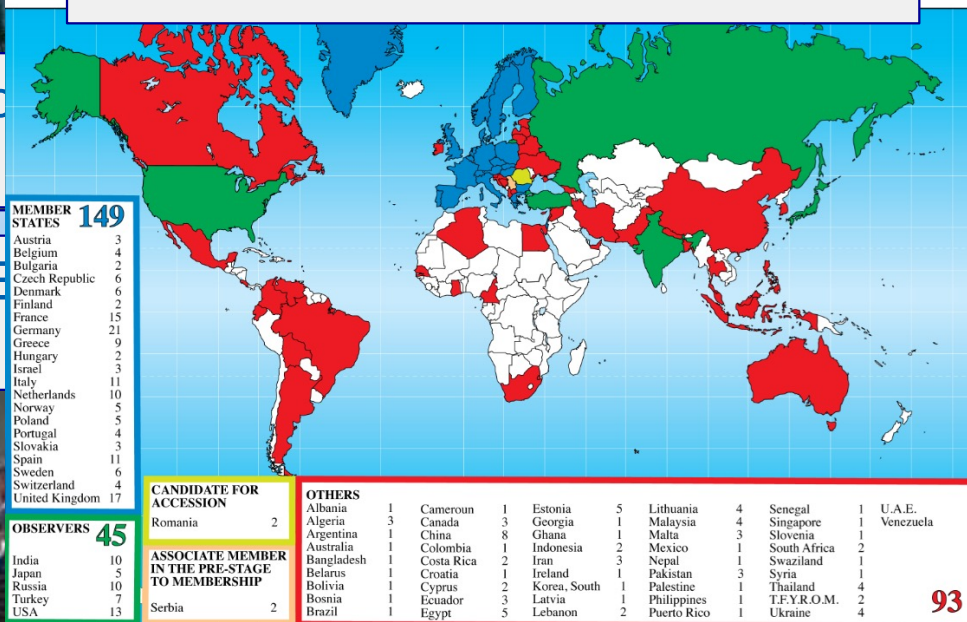
CERN Summer Students in 2014

1962: European School
(CERN-Dubna)

2003: Latin-America-CE
Schools

-Europe-Pacific Schools
(CERN-KEK)

0: African School
(N one of sponsors)



Council's Globalization Strategy

- “... to open Membership of CERN to all States irrespective of their geographical location ...” IL
- “... to create the status of Associate Membership, open to all States ...”
BR, CY, HR, IN, LT, LV, PK, TR, UA, SI, ...
- “... to phase out the current Observer Status arrangements *[for States]* ...” JP, (RU), US
- (Partnerships in global projects)

Other International Organizations

- JINR
- ESO hosted 1970 - 1980
- EC 1985
- SESAME 2004
- ITER 2008
- UN 2011
- ESA 2014



Challenges for Next 70 Years

- Next big project: FCC? even more global?



FCC: kick-off RS, US, CN, RU, MX, JP, ZA, KR

- Relations with major partners? US, JP, RU, CN

Recent Developments

- 2022 – Russian invasion of Ukraine
- 2023 – International Cooperation Agreements with RU, BL and JINR suspended
 - Hamas attacks IL, IL invades Gaza
- 2024 – International Cooperation Agreements with RU and BL terminated
 - International Cooperation Agreement with JINR maintained

Current Authorship Listings

- “Authors affiliated with an international laboratory covered by a cooperation agreement with CERN”
- “Authors affiliated with an institute formerly covered by a cooperation agreement with CERN”

Questions for the Future

- How to mitigate effects of scientific sanctions on scientists from RU and BL?
 - Particularly effects on students?
 - Access to workshops and schools?
- Role of JINR as channel for maintaining contact?
- How to prepare for post-war collaboration?